



# SAFETY DATA SHEET

Original Preparation Date: 2018-09-21

SDS#: GS-30454 Rev A  
Revision Date: 2018-11-29

## 1. Identification

**Product identifier** Genemed Sensitive DAB Substrate Kit

**Other means of identification**

**Product code** 10-0048

**Recommended use** For use with Genemed detection systems

**Recommended restrictions**

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer/Supplier** Sakura Finetek USA, Inc.

**Address** 1750 W 214th St  
Torrance, CA 90501  
United States

**Telephone** 1 (310) 972-7800

**Emergency phone number** Chemtrec, 1 (800) 424-9300

**Email** [SDSSupport@SakuraUS.com](mailto:SDSSupport@SakuraUS.com)

## 2. Hazard(s) identification

**Physical hazards** N/A

**Health hazards** Acute toxicity  
Germ cell mutagenicity  
Carcinogenicity

**Environmental hazards** Aquatic toxicity

**OSHA defined hazards** DAB  
Acute toxicity, Oral, Category 4 - H302  
Germ cell mutagenicity, Category 2 - H341  
Carcinogenicity, Subcategory 1B - H350

### Label elements

**Hazard symbol**



**Signal word**

Danger

**Hazard statement**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.

**Precautionary statement**

<b>Prevention</b>	P201 Obtain special instruction before use. P202 Do not handle until all safety precautions have been read and understood. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment.
<b>Response</b>	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P312 IF SWALLOWED: call a POISON CENTER/doctor if you feel unwell. P302+P352+P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. P308+P313 IF exposed or concerned, get medical advice/attention. P330 Rinse mouth. P362+P364 Take off contaminated clothing and wash before reuse. P391 Collect spillage.
<b>Storage</b>	P405 Store Locked up
<b>Disposal</b>	P501 Dispose of contents/container in accordance with local/regional/national/ international regulation.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None Known

**Hazard(s) not otherwise classified (HNOC)**

None Known

### 3. Composition/information on ingredients

**Mixtures:** Mixtures

<b>Chemical name</b>	<b>CAS number</b>	<b>Hazards</b>	<b>%</b>
<u>DAB Substrate</u>			
Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride	868272-85-9	Acute tox. 4 H302; Muta. 2 H341; Carc. 1B H350.	0.1%< (m/v) <1%

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. If not breathing give artificial respiration. Consult a physician.
<b>Skin contact</b>	Immediately wash skin with soap and copious amount of water and consult a physician.
<b>Eye contact</b>	Immediately flush eyes with copious amount of water for at least 15 minutes and consult a physician.
<b>Ingestion</b>	Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Most important symptoms/effects, acute and delayed</b>	See sections 2 and 11.
<b>Indication of immediate medical attention and special treatment needed</b>	No data available
<b>General Information</b>	N/A

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water spray, carbon dioxide, dry chemical powder or alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	None known
<b>Specific hazards arising from the chemical</b>	Carbon oxides.
<b>Special protective equipment and precautions for firefighters</b>	No data available.
<b>Fire-fighting equipment/instructions</b>	Wear self-contained breathing apparatus and protective fire-fighting clothing.
<b>Specific methods</b>	No data available.
<b>General fire hazards</b>	No data available.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**  
**Methods and materials for containment and cleaning up**  
**Environmental precautions**

Wear Personal protective Equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Stop leak and move containers from spill area if without risk. Do not let product enter drains. Keep in suitable closed containers for disposal.  
 Do not let product enter drains. Do not discharge into the environment. Dispose in accordance with applicable local, regional, national and international laws and regulations. See section 13 for disposal.

**7. Handling and storage**

**Precautions for safe handling**

Wear lab coat, chemical safety goggles, and gloves. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

Store in closed container at 2-8°C.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
None	N/A	N/A	N/A

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
None	N/A	N/A	N/A

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Biological limit values	No Data available		

**ACGIH Biological Exposure Indices**

Components	Value	Determinant
None	N/A	N/A

**Exposure guidelines** N/A

**Appropriate engineering controls** Handle in accordance with good industrial hygiene and safety practice. Wash hands before and after use of product.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Chemical safety goggles/glasses.
<b>Skin protection</b>	
<b>Hand protection</b>	Chemical resistant, impervious gloves should be worn at all times when handling this product.
<b>Other</b>	Appropriate personal protective equipment for the body, foot and any additional skin protection measures should be selected based on the tasks being performed and risks involved.
<b>Respiratory protection</b>	Use air purifying full-face particle respirator based on the tasks being performed and risks involved.
<b>Thermal hazards</b>	N/A

**General hygiene considerations** Wash hands before and after use of product.

**9. Physical and chemical properties**

## DAB Substrate

### Appearance

<b>Physical state</b>	
<b>Form</b>	Liquid
<b>Color</b>	DAB: Brown Buffer: Clear
<b>Odor</b>	No data available.
<b>Odor threshold</b>	No data available.
<b>pH</b>	DAB: 2.5-3.5 Buffer: 7.2-7.5
<b>Melting point/freezing point</b>	No data available.
<b>Initial boiling point and boiling range</b>	No data available.
<b>Flash point</b>	No data available.
<b>Evaporation rate</b>	No data available.
<b>Flammability (solid, gas)</b>	No data available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower (%)</b>	No data available.
<b>Flammability limit – upper (%)</b>	No data available.
<b>Explosive limit - lower (%)</b>	No data available.
<b>Explosive limit - upper (%)</b>	No data available.
<b>Vapor pressure</b>	No data available.
<b>Vapor density</b>	No data available.
<b>Relative density</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble
<b>Partition coefficient (n-octanol/water)</b>	No data available.
<b>Auto-ignition temperature</b>	No data available.
<b>Decomposition temperature</b>	No data available.
<b>Viscosity</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity</b>	No data available
<b>Chemical stability</b>	Stable under recommended storage and use conditions
<b>Possibility of hazardous reactions</b>	No data available
<b>Conditions to avoid</b>	No data available
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon Oxides, Nitrogen Oxides, Hydrogen Chloride gas.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Unlikely when using appropriate personnel protective equipment and safety measures.
<b>Skin contact</b>	Unlikely when using appropriate personnel protective equipment and safety measures.
<b>Eye contact</b>	Unlikely when using appropriate personnel protective equipment and safety measures.
<b>Ingestion</b>	Unlikely when using appropriate personnel protective equipment and safety measures.

**Symptoms related to the physical, chemical and toxicological characteristics  
Information on toxicological effects**

**DAB Substrate.**

**Acute toxicity**

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
<b>Skin corrosion/irritation</b>	No data available.	
<b>Serious eye damage/eye irritation</b>	No data available.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	No data available.	
<b>Skin sensitization</b>	No data available.	
<b>Germ cell mutagenicity</b>	No data available.	
<b>Carcinogenicity</b>	No data available.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		No data available.
<b>NTP Report on Carcinogens</b>		No data available.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		No data available.
<b>Reproductive toxicity</b>	No data available.	
<b>Specific target organ toxicity - single exposure</b>	No data available.	
<b>Specific target organ toxicity - repeated exposure</b>	No data available.	
<b>Repeated dose toxicity</b>	No data available.	
<b>Aspiration hazard</b>	No data available.	
<b>Chronic effects</b>	No data available.	
<b>Additional effects</b>	No data available.	

**12. Ecological information**

**DAB Substrate**

<b>Ecotoxicity</b>	No data available.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No data available.

**13. Disposal considerations**

**Disposal instructions**

**Waste from residues / unused products**

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose in accordance with applicable local, regional, national and international laws and regulations.

See Section 6 for cleanup procedures.

See Sections 7 and 8 for additional handling information and protection of employees.

**Contaminated packaging**

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

**14. Transport information**

<b>DOT</b>	Not regulated as a dangerous good.
<b>UN number</b>	N/A
<b>UN proper shipping name</b>	N/A
<b>Transport hazard class(es)</b>	N/A
<b>Class</b>	N/A
<b>Subsidiary risk</b>	N/A
<b>Label(s)</b>	N/A
<b>IATA</b>	N/A
<b>UN Number</b>	N/A
<b>UN proper shipping name</b>	N/A
<b>Transport hazard class(es)</b>	N/A
<b>Class</b>	N/A
<b>Subsidiary risk</b>	N/A
<b>Packing group</b>	N/A
<b>Environmental hazards</b>	N/A
<b>ERG Code</b>	N/A
<b>Special precautions for user</b>	N/A
<b>IMDG</b>	N/A
<b>UN number</b>	N/A
<b>UN proper shipping name</b>	N/A
<b>Transport hazard class(es)</b>	N/A
<b>Class</b>	N/A
<b>Subsidiary risk</b>	N/A
<b>Packing group</b>	N/A
<b>Environmental hazards</b>	N/A
<b>Marine pollutant</b>	N/A
<b>EmS</b>	N/A
<b>Special precautions for user</b>	N/A
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	N/A
<b>General information</b>	

**15. Regulatory information**

**US federal regulations**

<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not listed
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	
<b>SARA 302 Extremely hazardous substance</b>	Not subject to reporting requirements.
<b>SARA 311/312 Hazardous chemical</b>	<u>DAB Substrate</u> Acute Health Hazard and Chronic Health Hazard.
<b>SARA 313 (TRI reporting)</b>	This product does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels.
<b>Other federal regulations</b>	
<b>Clean Air Act (CAA) Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489)</b>	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).
<b>Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List</b>	This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
<b>Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)</b>	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
<b>Clean Water Act (CWA)</b>	This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
<b>US state regulations</b>	
<b>US. Massachusetts RTK - Substance List</b>	<u>DAB Substrate</u> Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride CAS: 868272-85-9
<b>US. New Jersey Worker and Community Right-to-Know Act</b>	<u>DAB Substrate</u> Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride CAS: 868272-85-9
<b>US. Pennsylvania Worker and Community Right-to-Know Law</b>	<u>DAB Substrate</u> Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride CAS: 868272-85-9
<b>US. California Proposition 65</b>	This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

#### International Inventories

<b>Country(s) or region</b>	<b>Inventory Name</b>	<b>On Inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes

Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	2018-09-21
<b>Revision date</b>	2018-11-29
<b>Version #</b>	A
<b>Further information</b>	HMIS is a registered trade and service mark of the American Coatings Association (ACA).
<b>HMIS® ratings</b>	<u>DAB Substrate</u> Health: 2 Flammability: 0 Physical hazard: 0

**NFPA ratings** DAB Substrate



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